\_\_\_\_\_\_

Sequence Listing could not be accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2009; month=10; day=27; hr=13; min=55; sec=26; ms=344; ]

\_\_\_\_\_\_

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Reviewer Comments:

<210> 27

<211> 149

<212> PRT

<213> Capsicum annuum, Brassica oleracea, Nicotiana tabacum

<400> 27

The above <213> response shows three sources, which denote a recombinant sequence. As a result, please use "<213> Artificial Sequence", instead, and move the sources to the <220>-<223> section. This type of response also appears in Sequence 30 and subsequent sequences.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## Validated By CRFValidator v 1.0.3

Application No: 10587326 Version No: 2.0

Input Set:

Output Set:

**Started:** 2009-10-13 12:19:53.834

Finished: 2009-10-13 12:19:58.417

**Elapsed:** 0 hr(s) 0 min(s) 4 sec(s) 583 ms

Total Warnings: 18

Total Errors: 0

No. of SeqIDs Defined: 88

Actual SeqID Count: 88

Error code	Error Description
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W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 402	Undefined organism found in <213> in SEQ ID (27)
W 402	Undefined organism found in <213> in SEQ ID (30)
W 402	Undefined organism found in <213> in SEQ ID (32)
W 402	Undefined organism found in <213> in SEQ ID (36)
W 402	Undefined organism found in <213> in SEQ ID (37)
W 402	Undefined organism found in <213> in SEQ ID (41)
W 402	Undefined organism found in <213> in SEQ ID (44)
W 402	Undefined organism found in <213> in SEQ ID (47)
W 402	Undefined organism found in <213> in SEQ ID (48)
W 402	Undefined organism found in <213> in SEQ ID (52)
W 402	Undefined organism found in <213> in SEQ ID (65)
W 402	Undefined organism found in <213> in SEQ ID (66)
W 402	Undefined organism found in <213> in SEQ ID (76)
W 402	Undefined organism found in <213> in SEQ ID (84)

## SEQUENCE LISTING

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<110> Max-Plank-Gesellschaft zur Forderung der Wissenschaften
      Fischer, Gunter
      Edlich, Frank
      Weiwad, Matthias
       Jarczowski, Franziska
      Kullertz, Gerhard
<120> Method for Identifying and Producing Effectors of
       Calmodulin-Dependent Peptidyl-Prolyl cis/trans Isomerases
<130> VOS0068/US
<140> 10587326
<141> 2009-10-13
<150> PCT/EP05/000656
<151> 2005-01-24
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Ser Gly Asp Arg Gly Val Leu Lys Asp Val Ile Arg Glu Gly Ala Gly
     35
                      40
                                      45
Asp Leu Val Ala Pro Asp Ala Ser Val Leu Val Lys Tyr Ser Gly Tyr
   50 55 60
Leu Glu His Met Asp Arg Pro Phe Asp Ser Asn Tyr Phe Arg Lys Thr
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65
                              75
                                                 80
Pro Arg Leu Met Lys Leu Gly Glu Asp Ile Thr Leu Trp Gly Met Glu
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Leu Gly Leu Leu Ser Met Arg Arg Gly Glu Leu Ala Arg Phe Leu Phe

100 105 110

Lys Pro Asn Tyr Ala Tyr Gly Thr Leu Gly Cys Pro Pro Leu Ile Pro 115 120 125

Pro Asn Thr Thr Val Leu Phe Glu Ile Glu Leu Leu Asp Phe Leu Asp 130 135 140

Gln Phe Pro Leu Gln Lys Val Leu Lys Val Ala Ala Thr Glu Arg Glu 165 170 175

Phe Gly Asn Tyr Leu Phe Arg Gln Asn Arg Phe Tyr Asp Ala Lys Val 180 185 190

Arg Tyr Lys Arg Ala Leu Leu Leu Leu Arg Arg Arg Ser Ala Pro Pro 195 200 205

Glu Glu Gln His Leu Val Glu Ala Ala Lys Leu Pro Val Leu Leu Asn 210 215 220

Leu Ser Phe Thr Tyr Leu Lys Leu Asp Arg Pro Thr Ile Ala Leu Cys 225 230 230 235

Tyr Gly Glu Gln Ala Leu Ile Ile Asp Gln Lys Asn Ala Lys Ala Leu 245 250 255

Phe Arg Cys Gly Gln Ala Cys Leu Leu Thr Glu Tyr Gln Lys Ala 260  $\phantom{0}265$   $\phantom{0}270$ 

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Ile Asn Asn Glu Leu Lys Lys Leu Ala Ser Cys Tyr Arg Asp Tyr Val 290 295 300

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<213> Homo sapiens
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40
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  50 55 60
Glu Ala Glu Gln Pro Gly Ala Leu Ala Arg Glu Phe Leu Ala Ala Met
        70
                  75
65
Glu Pro Glu Pro Ala Pro Ala Pro Glu Glu Trp Leu Asp Ile
        85 90 95
Leu Gly Asn Gly Leu Leu Arg Lys Lys Thr Leu Val Pro Gly Pro Pro
 100 105 110
Gly Ser Ser Arg Pro Val Lys Gly Gln Val Val Thr Val His Leu Gln
   115 120 125
Thr Ser Leu Glu Asn Gly Thr Arg Val Glu Glu Pro Glu Leu Val
  130 135 140
Phe Thr Leu Gly Asp Cys Asp Val Ile Gln Ala Leu Asp Leu Ser Val
          150
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145
                               160
Pro Leu Met Asp Val Gly Glu Thr Ala Met Val Thr Ala Asp Ser Lys
    165 170 175
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Tyr Cys Tyr Gly Pro Gln Gly Arg Ser Pro Tyr Ile Pro Pro His Ala

190

180 185

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Leu	Glu 210	Met	Leu	Thr	Gly	Gln 215	Glu	Arg	Val	Ala	Leu 220	Ala	Asn	Arg	Lys
Arg 225	Glu	Суз	Gly	Asn	Ala 230	His	Tyr	Gln	Arg	Ala 235	Asp	Phe	Val	Leu	Ala 240
Ala	Asn	Ser	Tyr	Asp 245	Leu	Ala	Ile	Lys	Ala 250	Ile	Thr	Ser	Ser	Ala 255	Lys
Val	Asp	Met	Thr 260	Phe	Glu	Glu	Glu	Ala 265	Gln	Leu	Leu	Gln	Leu 270	Lys	Val
Lys	Суз	Leu 275	Asn	Asn	Leu	Ala	Ala 280	Ser	Gln	Leu	Lys	Leu 285	Asp	His	Tyr
Arg	Ala 290	Ala	Leu	Arg	Ser	Cys 295	Ser	Leu	Val	Leu	Glu 300	His	Gln	Pro	Asp
Asn 305	Ile	Lys	Ala	Leu	Phe 310	Arg	Lys	Gly	Lys	Val 315	Leu	Ala	Gln	Gln	Gly 320
Glu	Tyr	Ser	Glu	Ala 325	Ile	Pro	Ile	Leu	Arg 330	Ala	Ala	Leu	Lys	Leu 335	Glu
Pro	Ser	Asn	Lys 340	Thr	Ile	His	Ala	Glu 345	Leu	Ser	Lys	Leu	Val 350	Lys	Lys
His	Ala	Ala 355	Gln	Arg	Ser	Thr	Glu 360	Thr	Ala	Leu	Tyr	Arg 365	Lys	Met	Leu
Gly	Asn 370	Pro	Ser	Arg	Leu	Pro 375	Ala	Lys	Суз	Pro	Gly 380	Lys	Gly	Ala	Trp
Ser 385	Ile	Pro	Trp	Lys	Trp 390	Leu	Phe	Gly	Ala	Thr 395	Ala	Val	Ala	Leu	Gly 400
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Val Leu Lys Ile Val Lys Arg Val Gly Asn Gly Glu Glu Thr Pro Met
    35
           40 45
Ile Gly Asp Lys Val Tyr Val His Tyr Lys Gly Lys Leu Ser Asn Gly
 50 55 60
Lys Lys Phe Asp Ser Ser His Asp Arg Asn Glu Pro Phe Val Phe Ser
         70 75
Leu Gly Lys Gly Gln Val Ile Lys Ala Trp Asp Ile Gly Val Ala Thr
       85 90 95
Met Lys Lys Gly Glu Ile Cys His Leu Leu Cys Lys Pro Glu Tyr Ala
              105
      100
                                    110
Tyr Gly Ser Ala Gly Ser Leu Pro Lys Ile Pro Ser Asn Ala Thr Leu
    115 120 125
Phe Phe Glu Ile Glu Leu Asp Phe Lys Gly Glu Asp Leu Phe Glu
        135 140
  130
Asp Gly Gly Ile Ile Arg Arg Thr Lys Arg Lys Gly Glu Gly Tyr Ser
145 150 155
                                          160
Asn Pro Asn Glu Gly Ala Thr Val Glu Ile His Leu Glu Gly Arg Cys
                 170
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Gly Gly Arg Met Phe Asp Cys Arg Asp Val Ala Phe Thr Val Gly Glu
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Gly Glu Asp His Asp Ile Pro Ile Gly Ile Asp Lys Ala Leu Glu Lys 195 200 205

190

180

Met	Gln 210	Arg	Glu	Glu	Gln	Cys 215	Ile	Leu	Tyr	Leu	Gly 220	Pro	Arg	Tyr	Gly
Phe 225	Gly	Glu	Ala	Gly	Lys 230	Pro	Lys	Phe	Gly	Ile 235	Glu	Pro	Asn	Ala	Glu 240
Leu	Ile	Tyr	Glu	Val 245	Thr	Leu	Lys	Ser	Phe 250	Glu	Lys	Ala	Lys	Glu 255	Ser
Trp	Glu	Met	Asp 260	Thr	Lys	Glu	Lys	Leu 265	Glu	Gln	Ala	Ala	Ile 270	Val	Lys
Glu	Lys	Gly 275	Thr	Val	Tyr	Phe	Lys 280	Gly	Gly	Lys	Tyr	Met 285	Gln	Ala	Val
Ile	Gln 290	Tyr	Gly	Lys	Ile	Val 295	Ser	Trp	Leu	Glu	Met 300	Glu	Tyr	Gly	Leu
Ser 305	Glu	Lys	Glu	Ser	Lys 310	Ala	Ser	Glu	Ser	Phe 315	Leu	Leu	Ala	Ala	Phe 320
Leu	Asn	Leu	Ala	Met 325	Cys	Tyr	Leu	Lys	Leu 330	Arg	Glu	Tyr	Thr	Lys 335	Ala
Val	Glu	Cys	Cys 340	Asp	Lys	Ala	Leu	Gly 345	Leu	Asp	Ser	Ala	Asn 350	Glu	Lys
Gly	Leu	Tyr 355	Arg	Arg	Gly	Glu	Ala 360	Gln	Leu	Leu	Met	Asn 365	Glu	Phe	Glu
Ser	Ala 370	Lys	Gly	Asp	Phe	Glu 375	Lys	Val	Leu	Glu	Val 380	Asn	Pro	Gln	Asn
Lys 385	Ala	Ala	Arg	Leu	Gln 390	Ile	Ser	Met	Суз	Gln 395	Lys	Lys	Ala	Lys	Glu 400
His	Asn	Glu	Arg	Asp 405	Arg	Arg	Ile	Tyr	Ala 410	Asn	Met	Phe	Lys	Lys 415	Phe
Ala	Glu	Gln	Asp 420	Ala	Lys	Glu	Glu	Ala 425	Asn	Lys	Ala	Met	Gly 430	Lys	Lys

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<211> 459

<212> PRT

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Ile Gly Asp Arg Val Phe Val His Tyr Thr Gly Trp Leu Leu Asp Gly 50 60

Thr Lys Phe Asp Ser Ser Leu Asp Arg Lys Asp Lys Phe Ser Phe Asp 65 70 75 80

Leu Gly Lys Gly Glu Val Ile Lys Ala Trp Asp Ile Ala Ile Ala Thr 85 90 95

Met Lys Val Gly Glu Val Cys His Ile Thr Cys Lys Pro Glu Tyr Ala 100 105 110

Tyr Gly Ser Ala Gly Ser Pro Pro Lys Ile Pro Pro Asn Ala Thr Leu 115 120 125

Val Phe Glu Val Glu Leu Phe Glu Phe Lys Gly Glu Asp Leu Thr Glu 130 135 140

Glu Glu Asp Gly Gly Ile Ile Arg Arg Ile Gln Thr Arg Gly Glu Gly
145 150 155 160

Tyr Ala Lys Pro Asn Glu Gly Ala Ile Val Glu Val Ala Leu Glu Gly
165 170 175

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Gly	Glu	Gly 195	Glu	Asn	Leu	Asp	Leu 200	Pro	Tyr	Gly	Leu	Glu 205	Arg	Ala	Ile
Gln	Arg 210	Met	Glu	Lys	Gly	Glu 215	His	Ser	Ile	Val	Tyr 220	Leu	Lys	Pro	Ser
Tyr 225	Ala	Phe	Gly	Ser	Val 230	Gly	Lys	Glu	Lys	Phe 235	Gln	Ile	Pro	Pro	Asn 240
Ala	Glu	Leu	Lys	Tyr 245	Glu	Leu	His	Leu	Lys 250	Ser	Phe	Glu	Lys	Ala 255	Lys
Glu	Ser	Trp	Glu 260	Met	Asn	Ser	Glu	Glu 265	Lys	Leu	Glu	Gln	Ser 270	Thr	Ile
Val	Lys	Glu 275	Arg	Gly	Thr	Val	Tyr 280	Phe	Lys	Glu	Gly	Lys 285	Tyr	Lys	Gln
Ala	Leu 290	Leu	Gln	Tyr	Lys	Lys 295	Ile	Val	Ser	Trp	Leu 300	Glu	Tyr	Glu	Ser
Ser 305	Phe	Ser	Asn	Glu	Glu 310	Ala	Gln	Lys	Ala	Gln 315	Ala	Leu	Arg	Leu	Ala 320
Ser	His	Leu	Asn	Leu 325	Ala	Met	Суз	His	Leu 330	Lys	Leu	Gln	Ala	Phe 335	Ser
Ala	Ala	Ile	Glu 340	Ser	Cys	Asn	Lys	Ala 345	Leu	Glu	Leu	Asp	Ser 350	Asn	Asn
Glu	Lys	Gly 355	Leu	Phe	Arg	Arg	Gly 360	Glu	Ala	His	Leu	Ala 365	Val	Asn	Asp
Phe	Glu 370	Leu	Ala	Arg	Ala	Asp 375	Phe	Gln	Lys	Val	Leu 380	Gln	Leu	Tyr	Pro
Asn 385	Asn	Lys	Ala	Ala	Lys 390	Thr	Gln	Leu	Ala	Val 395	Суз	Gln	Gln	Arg	Ile 400

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Asp Arg Glu Gly Leu Leu Ser Met Ala Asn Ala Gly Arg Asn Thr Asn 115 120 125

Gly Ser Gln Phe Phe Ile Thr Thr Val Pro Thr Pro His Leu Asp Gly

130 135 140

Lys His Val Val Phe Gly Gln Val Ile Lys Gly Ile Gly Val Ala Arg 145 150 155 160

Ile Leu Glu Asn Val Glu Val Lys Gly Glu Lys Pro Ala Lys Leu Cys 165 170 175

Val Ile Ala Glu Cys Gly Glu Leu Lys Glu Gly Asp Asp Gly Gly Ile 180 185 190

Phe Pro Lys Asp Gly Ser Gly Asp Ser His Pro Asp Phe Pro Glu Asp 195 200 205

Ala Asp Ile Asp Leu Lys Asp Val Asp Lys Ile Leu Leu Ile Thr Glu 210 215 220

Asp Leu Lys Asn Ile Gly Asn Thr Phe Phe Lys Ser Gln Asn Trp Glu 225 230 230 235

Met Ala Ile Lys Lys Tyr Ala Glu Val Leu Arg Tyr Val Asp Ser Ser 245 250 255

Lys Ala Val Ile Glu Th